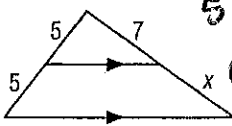


Find  $x$ .

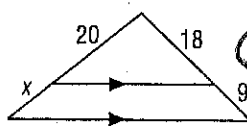
1.



$$\frac{5}{5} = \frac{7}{x}$$

$$x = 7$$

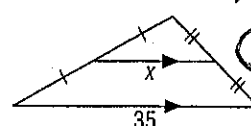
2.



$$\frac{20}{x} = \frac{18}{9}$$

$$x = 10$$

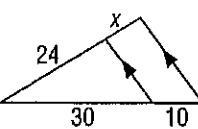
3.



$$x = \frac{1}{2} 35$$

$$x = 17.5$$

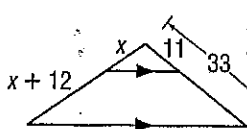
4.



$$\frac{24}{x} = \frac{30}{10}$$

$$x = 8$$

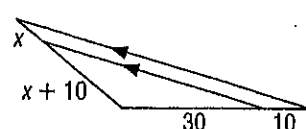
5.



$$\frac{x}{x+12} = \frac{11}{33}$$

$$x = 12$$

6.



$$\frac{x+10}{x} = \frac{30}{10}$$

$$3x = x+10$$

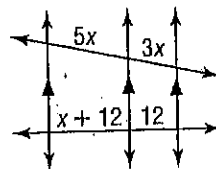
$$2x = 10$$

$$x = 5$$

Exercises

Find  $x$  and  $y$ .

1.



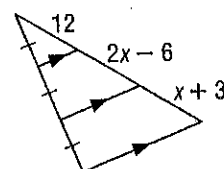
$$\frac{3x}{5x} = \frac{12}{x+12}$$

$$60 = 3x + 36$$

$$24 = 3x$$

$$8 = x$$

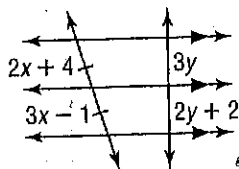
2.



$$x+3 = 12$$

$$x = 9$$

3.



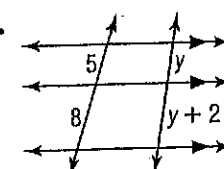
$$3y = 2y + 2$$

$$y = 2$$

$$2x + 4 = 3x - 1$$

$$5 = x$$

4.



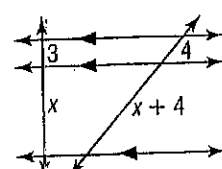
$$\frac{5}{8} = \frac{y}{y+2}$$

$$8y = 5y + 10$$

$$3y = 10$$

$$y = \frac{10}{3} = 3\frac{1}{3}$$

5.

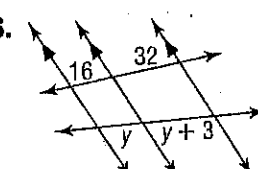


$$\frac{3}{x} = \frac{4}{x+4}$$

$$3x + 12 = 4x$$

$$12 = x$$

6.



$$\frac{16}{32} = \frac{y}{y+3}$$

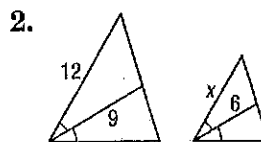
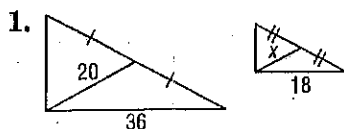
$$2y = y + 3$$

$$y = 3$$

Find  $x$  for each pair of similar triangles.

$$\frac{20}{x} = \frac{3}{18}$$

$$x = 10$$

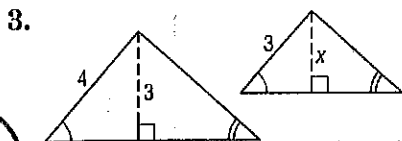


$$\frac{12}{x} = \frac{9}{6}$$

$$x = 8$$

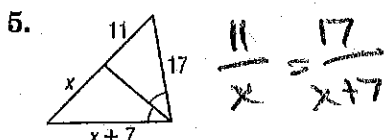
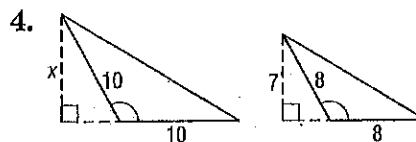
$$\frac{4}{3} = \frac{3}{x}$$

$$x = 2\frac{1}{4}$$



$$\frac{x}{7} = \frac{10}{8}$$

$$x = 8\frac{3}{4}$$

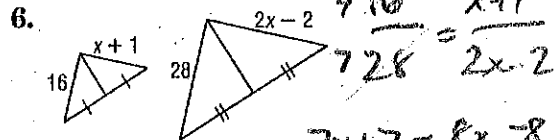


$$\frac{11}{x} = \frac{17}{x+7}$$

$$17x = 11x + 77$$

$$6x = 77$$

$$x = 12\frac{5}{6}$$



$$\frac{16}{728} = \frac{x+1}{2x-2}$$

$$7x+7 = 8x-8$$

$$15 = x$$

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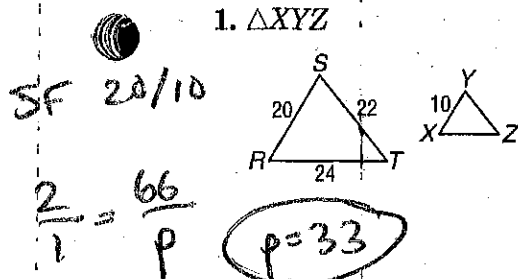
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Glencoe Geometry

### Exercises

Each pair of triangles is similar. Find the perimeter of the indicated triangle.

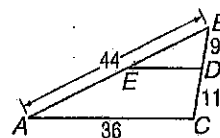
1.  $\triangle XYZ$



$$\frac{2}{1} = \frac{66}{p}$$

$$p = 33$$

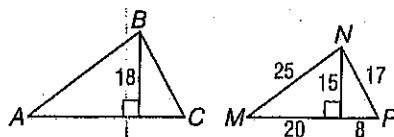
2.  $\triangle BDE$



$$\frac{9}{20} = \frac{p}{160}$$

$$p = 45$$

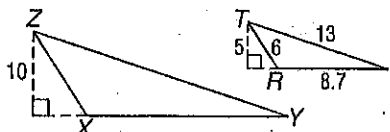
3.  $\triangle ABC$



$$\frac{18}{15} = \frac{p}{70}$$

$$p = 84$$

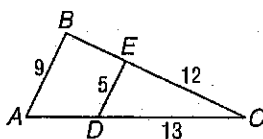
4.  $\triangle XYZ$



$$\frac{10}{5} = \frac{p}{27.7}$$

$$p = 55.4$$

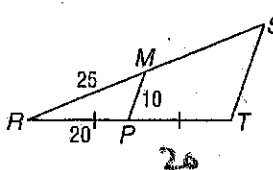
5.  $\triangle ABC$



$$\frac{5}{9} = \frac{30}{p}$$

$$p = 54$$

6.  $\triangle RST$



$$\frac{120}{240} = \frac{55}{p}$$

$$110 = p$$

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Glencoe Geometry

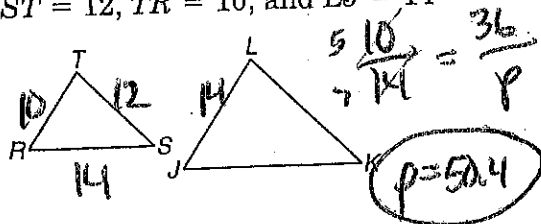
## 6-5

## Skills Practice

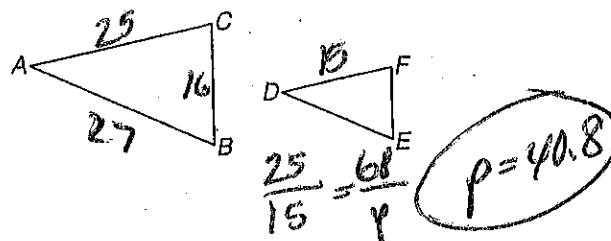
## Parts of Similar Triangles

Find the perimeter of the given triangle.

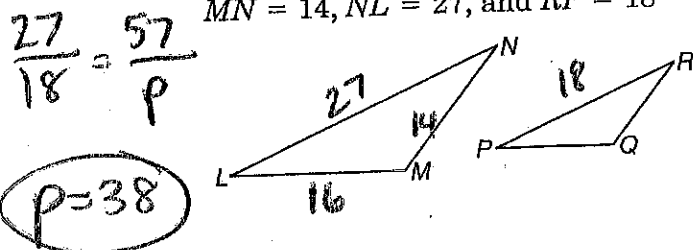
1.  $\triangle JKL$ , if  $\triangle JKL \sim \triangle RST$ ,  $RS = 14$ ,  $ST = 12$ ,  $TR = 10$ , and  $LJ = 14$



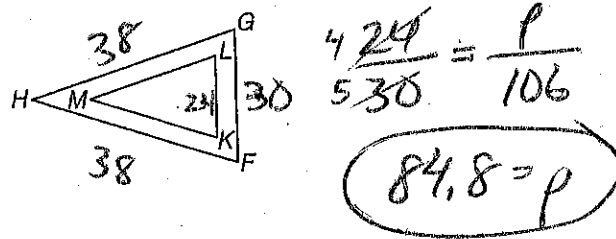
2.  $\triangle DEF$ , if  $\triangle DEF \sim \triangle ABC$ ,  $AB = 27$ ,  $BC = 16$ ,  $CA = 25$ , and  $FD = 15$



3.  $\triangle PQR$ , if  $\triangle PQR \sim \triangle LMN$ ,  $LM = 16$ ,  $MN = 14$ ,  $NL = 27$ , and  $RP = 18$



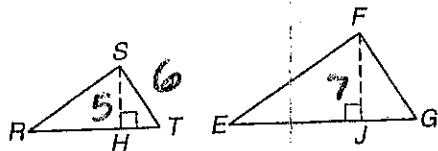
4.  $\triangle KLM$ , if  $\triangle KLM \sim \triangle FGH$ ,  $FG = 30$ ,  $GH = 38$ ,  $HF = 38$ , and  $KL = 24$



Use the given information to find each measure.

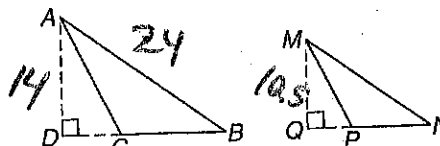
5. Find  $FG$  if  $\triangle RST \sim \triangle EFG$ ,  $\overline{SH}$  is an altitude of  $\triangle RST$ ,  $\overline{FJ}$  is an altitude of  $\triangle EFG$ ,  $ST = 6$ ,  $SH = 5$ , and  $FJ = 7$ .

$$\frac{5}{7} = \frac{6}{FG}$$



$$FG = 8.4$$

6. Find  $MN$  if  $\triangle ABC \sim \triangle MNP$ ,  $\overline{AD}$  is an altitude of  $\triangle ABC$ ,  $\overline{MQ}$  is an altitude of  $\triangle MNP$ ,  $AB = 24$ ,  $AD = 14$ , and  $MQ = 10.5$ .

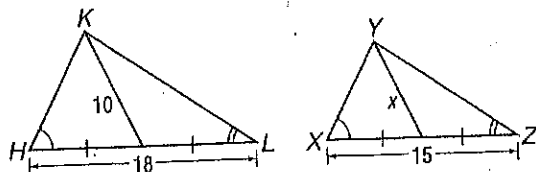


$$\frac{24}{MN} = \frac{14}{10.5}$$

$$MN = 18$$

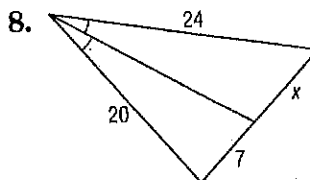
Find  $x$ .

7.  $\triangle HKL \sim \triangle XYZ$



$$\frac{10}{18} = \frac{x}{15}$$

$$x = 8\frac{1}{3}$$



$$\frac{20}{7} = \frac{24}{x}$$

$$x = 8.4$$

